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ABSTRACT

Knowledge about college costs was studied with a sample of parents and their teenage children. The sample included high school sophomores and seniors who completed the 1980 High School and Beyond survey. Responses to a mail survey were obtained from a national sample of 6,564 parents. Overall, data from parents and students suggest that parents are not especially knowledgeable about the expenses for fees, tuition, and books in different types of schools. The percent of respondents answering "don't know" was high, considering that the question asked only for an estimate of educational costs. Parents were more knowledgeable than their children, however, especially in the sophomore year, and children whose parents were more knowledgeable were also more knowledgeable. The level of the parents' knowledge depended most strongly on the parents' own education. Those with college expectations for their children were also somewhat more knowledgeable. Race and family income had some effect on knowledge of costs. It is suggested that to the extent that lack of information is associated with socioeconomic status, the goal of equal access to educational opportunities will not be realized. (SW)

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PARENTS, STUDENTS, AND KNOWLEDGE OF COLLEGE COSTS

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Parents, Students, and Knowledge of College Costs

There is great variation among colleges and universities with respect to size, location, programs, and costs. In deciding whether to go to college and which college to attend, the ideal consumer would have accurate knowledge of the range of colleges and their costs as well as of his/her tastes and abilities. With this knowledge, the consumer would then be able to make an informed decision regarding college attendance and selection of the appropriate institution of higher education. Unfortunately, relatively few college-bound high school students or their parents <u>are</u> ideal consumers. While they may have some sense of the student's capability to attend college, they often do not know about the other part of the equation--the institutions and costs. In this paper, we look at how much parents and their high school sophomores and seniors know about college costs and at what explains variation among them in this knowledge. The data we use are from the 1980 High School and Beyond survey.

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Parents and College Costs

With respect to college attendance, the student and parent(s) act as a joint consumer. Students are the ones who actually attend college. While parents vary in the roles they take, they often play an important part in the decision of whether and where the student will go to college and in meeting the costs when their child does go on to higher education.[1] The importance of parents' aspirations and expectations for their children's eventual educational attainments has been shown in many studies (e.g., Sewell and Hauser, 1975; Davies and Kandel, 1980). Their willingness to take on some financial burden

for their children's further education is indicated by High School and Beyond parents' responses to a question about who had the main responsibility for the cost of higher education: 56 percent of the parents said that parents, rather than students or the government, had the main responsibility.

An early piece of practical information relevant to college attendance is knowledge of the costs. For many families the total costs of tuition, fees, books, living expenses, and transportation will be offset by financial aid. Getting information about financial aid, though, can be costly in itself. Willett (1976) estimated that the price of financial aid information to a student applying to one independent institution was approximately $100 and 100 days of waiting. As Willett pointed out, one often does not get specific information on financial aid until one has gone through the time and expense leading to acceptance at a given school. While there are costs involved in finding out about gross costs, they are less. At least initial planning for college, then, might be done on the basis of the gross cost.

The research that has been done on knowledge of college costs suggests that many parents and students do not know much about higher educational costs, that such knowledge is either adapted to or affects college plans, and that it varies according to parental income. One study of parents who attended "Financial Aid Night" in New York State found that less than 42 percent of these parents, who were actively seeking information about financing higher education, could give an accurate estimate of the yearly tuition costs of the college their child planned to attend (Moore, 1973: 236). In an Ontario study of parents and high school students, 35 percent of the parents of grade 10 students and 40 percent of parents of grade 12 students knew the average

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tuition for an academic year at an Ontario university (which would have less variation than college tuitions in most U.S. states). Their children had the same distribution of knowledge in grade 12 (when 40 percent of the students could give an accurate response) but much less in grade 10 (when only 17 percent of the students knew how much a year of Ontario university cost in tuition).

A 1959 U.S. study also found parents to be unaware of college costs. Among parents of children of all ages who expected one or more of their children to attend college, 8 percent had no definite idea of what costs would be (Roper, 1959: 12). Those with lower incomes were less likely to make an estimate than those with higher incomes. One reason for this might be that those with lower incomes had not gone to college themselves and so knew less about the system. In this study, among those who did give estimates, the higher their income, the higher the estimate of college costs. Some of this association could reflect the more expensive college choices of those with higher incomes. It is also possible that parents of higher socioeconomic status make more reasonable estimates of costs, while those from lower income levels who hope to send their children to college are overoptimistic.

More recent studies do show a relationship between types of mistakes in estimating college costs and college plans. In the Ontario study, a greater proportion of the parents of students who expected to attend a university knew the range of tuition in Ontario, 55 percent. The direction of mistakes when an estimate is given varies by plans. Students who plan to go on to college tend to underestimate the cost, while those who do not plan to go on overestimate them (Knoell, 1970; Davis and Van Dusen, 1975; Pennsylvania Higher Education

Assistance Agency, 1976).

It is not clear whether lack of college plans leads to an incorrect estimate of costs, or lack of correct knowledge discourages college plans, or whether the two work simultaneously. Those who do not intend to go to college would have no immediate reason to learn about college costs. On the other hand, the overestimates made by those who do not plan to attend may act to preclude consideration of college attendance. Indeed, in Pennsylvania and Iowa studies, nearly 40 percent of those who were not planning to continue their education said that they did not have the money to pay for it (Knoell, 1970; Davis and Van Dusen, 1975; PHEAA, 1976). In the 1972 National Longitudinal Study of the Class of 1972, of the high school seniors who did not plan to continue their education, 33 percent gave as a reason that they could not afford it. An underestimate of costs, on the other hand, may encourage more optimistic plans for college attendance.

While these studies are suggestive, they do not provide up-to-date national information on the state of parents' and students' knowledge of college costs. In this paper, we provide information on parents' and students' knowledge of college costs using data from a large 1980 national survey. In the next section we describe this data set. Then we discuss how we operationalize the idea of "knowledge of college costs." Following this we present the results of our analysis of the distribution of knowledge. In the conclusions, we discuss the implications of these findings.

Data

The data are from the student and parent surveys of High School and Beyond (HS&B). High School and Beyond was sponsored by the National Center for

Education Statistics (U.S. Department of Education). The Parent Survey was additionally sponsored by the Department of Education's Office of Evaluation and Dissemination. Data collection was carried out by the National Opinion Research Center of the University of Chicago during 1980. Early in 1980, over 58,000 sophomores and seniors at 1015 public and private schools in the 50 states and District of Columbia completed questionnaires about their high school experiences and plans for the future and took a battery of ability tests.[2] From a sample of 312 of the participating schools, 7201 parents were contacted, with the mother as the preferred respondent. These parents were surveyed during October to December, 1980, by mail with a personal interview follow-up of nonrespondents. This resulted in information from 6564 parents (a response rate of 91.1 percent). We will be using the data from these parents and their students.

This data set gives us a national sample of students and their parents. It includes not only students planning to attend college but also those with other post-high school plans. As seen in the brief review of the literature, comparisons between those planning to attend college and other students can provide clues as to the role of knowledge of higher education in the planning process. By having data on both parents and children within the same households, we can see to what extent knowledge on the part of one family member substitutes for or complements that held by another. Further, we have detailed income data from the parents. While students can often give accurate reports of their parents' education and occupation, they very often do not have a good idea of their parents' income and assets. Since knowledge of higher educational costs has been found to vary with income, we wish to have a good

measure of this variable.

While these data are the best available for our purposes, they do contain some problems of timing. For the parents of seniors, knowledge of costs may be influenced by actually having the HS&B student enrolled in college. For other parents and students, it may be difficult to disentangle the effect of college plans on knowledge from the effect of knowledge on college plans. We will be making at least a preliminary attempt to deal with these problems and will report results from a larger project that explicitly modeled reciprocal effects between knowledge and plans. For future research, the follow-up data will be extremely useful in following the direction of effects.

Another problem has to do with variation in level of knowledge of college costs within the family. We have data collected from the child and a parent. While in some cases these two individuals constitute the joint consumer, an additional parent is usually involved. The parent not surveyed may be more or less knowledgeable about college costs than the parent included in the survey. Thus, a sample parent who is not particularly knowledgeable about costs may be compensated for by another more knowledgeable parent who is equally a part of the consuming unit. Either the father or mother was included in the sample. The sex of the respondent may influence the level of knowledge, and therefore which parent is included in the sample could make a difference in the level of knowledge measured by the survey. Comparing responses by sex showed that while men and women are very close in terms of the percentages giving the correct response, men appear to be somewhat more knowledgeable about college costs than are women. In later analyses, we will therefore control for the sex of the parent respondent.

All the bivariate analyses reported here were done with weighted data. These weights adjust for the differential selection probabilities of the schools and for nonresponse and give population estimates. For statistical tests, we used weights deflated to give actual sample sizes. Logistic regressions were unweighted.

Measuring Knowledge of College Costs

Parents and students were asked, "How much do you think each of the following kinds of schooling would cost for a year? Only include expenses for tuition, fees, books, not living expenses." The three types of higher educational institutions were a public junior or community college, a state four-year college or university, and a private four-year college or university. The response categories included: under $500, $500-$1,000, $1,001-$2,000, $2,001-$3,000, $3,001-$5,000, $5,001-$7,000, and Don't Know.

It is possible to compare, in a general way, the extent to which students' and parents' estimates of college costs for each category of institution coincide with the average costs for that category. According to The College Board's Cost Book 1980-81, the average cost of tuition, fees, and books for 1980-81 at a public two-year institution was $682, at a public four-year institution $941, and at a private four-year institution $3,521 (College Scholarship Service, College Entrance Examination Board, 1980: 11). Thus, the correct reponse for both categories of public institutions would be $500-$1,000 and for the private four-year institutions, $3,001-$5,000.

The response categories are broad enough to accommodate a large proportion of the variation among the costs at all institutions of higher education of each type. Variance in the costs themselves, however, may still account for

some of the variance in the parents' estimates of college costs. Differing parental estimates may result from different frames of reference--two parents may give correct estimates for costs at a given type of institution in different segments of the higher education market, such as different geographical markets. The cost estimates a parent gives may be correct for a particular institution or group of institutions even though it does not fall in the correct cost category. In order to measure one individual's knowledge of college costs with precision, it would be necessary to compare his or her estimate of the costs of one particular institution with the actual costs of that institution. Our data are not so detailed.

In order to compare, in a rough manner, parents' knowledge of college costs with the actual costs, we looked at the distribution of actual costs and parents' estimates as they are divided among the "correct estimate," "overestimate," and "underestimate" categories, as defined above. Appendix A shows the lack of agreement between the distributions. For all three types of institutions, more than half of the actual costs fall in the "correct estimate" category while the parents' estimates fall short of this percent for each of the three types of institutions. The most revealing aspect of the comparison is the distribution of the parents' estimates that fall outside the correct estimate category. For all three types of institutions, the percent of parents' overestimates greatly exceeds the actual costs that are greater than the amounts in the category containing actual average costs, and the percent of underestimates is smaller. We will discuss below the implications of these incorrect estimates.

Results

Parents and Children

What did parents in 1980 know about the cost of higher education? To what extent did parents and their children share knowledge or lack of it? In this section, we describe the distribution of knowledge of college costs among parents and their high school children.

Table 1 shows that no more than one-third of the parents knew the correct average cost of any of the three types of institutions, as defined here. The percent of correct estimates ranged from 34 percent for public two-year institutions to 10 percent for public four-year institutions. The percent of overestimates for all three types of institutions are much greater than the percent of underestimates. This is consistent with the findings of Porter, Porter, and Blishen who found that among Canadian parents in the province of Ontario the percent of respondents who gave an overestimate exceeded the percent who gave an underestimate. That the percent of overestimates is greater than the percent of underestimates might be accounted for by the way in which people usually think about college costs. The questions asks for an estimate of tuition, fees, and books only. Many people may be unaccustomed to thinking about these costs apart from living expenses. This is quite possible for schools, particularly private institutions, where most students live away from home.

One might expect that there would be a difference in the level of knowledge of parents of sophomores and parents of seniors because the parents were surveyed in the autumn following the year their child was either a senior or a sophomore. Since some of the seniors would be in college at this point, it

would seem that a larger portion of the parents of seniors would be knowledgeable about college costs. Table 1 shows, quite surprisingly, that this is not the case. Indeed, distributions of the responses of the two groups are very similar.

In the Introduction we discussed how parents and students both make decisions about the student's higher education. Given this, the parents' paucity of knowledge about costs might be compensated for by greater knowledge on the part of students. Since students are the ones who actually attend college it might be thought that they would be more knowledgeable about costs. Other research, cited above, found that this was not the case. Table 2 and Table 3 also show that students are even less knowledgeable than their parents. In all instances high school sophomores and seniors gave a lower percent of correct responses and a higher percent of "Don't Know" responses. The correct responses ranged from 29 percent of seniors regarding community college costs to 5 percent of sophomores regarding public four-year institutions. The percent of "Don't Know" responses ranged from 40 percent of sophomores regarding private four-year institutions to 16 percent of seniors regarding community colleges.[3]

While there is no noticeable difference in the responses of parents of seniors and parents of sophomores, there are differences between the responses of the two groups of students. The percent of "Don't Know" responses drops considerably between the sophomore year and the senior year (31 to 16 for community colleges, 33 to 18 for public four-year institutions, and 40 to 26 for private four-year institutions). While these are not longitudinal data, the contrast between these two grade levels, consistent with that in Porter et

al. (1979), suggests that as a student approaches the prospect of college attendance, his or her knowledge of the costs involved increases.

Students might gather information from many sources, including peers, teachers, and college representatives. Parents, however, are known to have a strong influence on their children's college plans and have a higher level of knowledge than students of gross college costs. It seems likely that one of the students' sources of information would be their parents. Tables 2 and 3 are consistent with this idea. While the estimates given by sophomores whose parents gave a correct estimate vary little from the estimates of all the sophomores, the estimates of seniors whose parents gave a correct estimate are more accurate than the estimates of the total sample of seniors (33 compared with 29 percent for community college costs, 14 compared with 8 percent for public four-year institutions, and 27 compared with 23 percent for private four-year institutions). The percent of seniors responding "Don't Know" also is lower among those whose parents gave a correct estimate in comparison with the total sample of seniors.

Even more striking is the difference between children of parents who did not know about costs and the rest of the students. Among parents who gave a "Don't Know" response, the percent of students who also did not know the costs was the highest of the four groups. For example, among seniors whose parents answered "Don't Know," 23 percent of the students also gave a "Don't Know" response for community college costs compared with 16 percent of all students. Indeed, the percent of students who gave the same type of response as their parent is higher than the overall percent for all four types of responses. This type of relationship holds for sophomores as well as for seniors, although

the relationship is not as striking among sophomores.

While the correlation between student and parent response is far from perfect, the tables suggest that the parent and student, as high school completion approaches, are acting in tandem in that their levels of knowledge are associated. The student's level of knowledge is related to his or her proximity to the prospect of college entrance while the parent's level of knowledge is more reflective of other factors. Students are not likely to consider the details of financing a college education until later in their high school career. On the other hand, parents are more likely to look farther into the future since they often assume major responsibility for paying the college bills, and they may have already faced college costs with an older child. It is plausible that, since the parents appear to precede the students in obtaining information regarding costs, when the students do become cost-conscious a major source of their information is discussions with their parents.

Income and Plans

Two variables are highlighted in the literature as affecting knowledge of college costs: income and college plans. Some parents would have more need than other parents for information about college costs. These include parents who aspire to a college education for their child, parents whose child plans to attend college, and the majority of these parents who find it imperative to meet the asociated costs within a limited budget. For such parents, the question of how much a college education costs is salient.

The literature reviewed suggests that while it is true that students and parents in families where the student plans to go on in school make an accurate or more optimistic estimate of college costs, those from lower income families are less informed than those in higher income brackets. Our data, too, show these relationships. In Tables 4 and 5, level of parents' knowledge of costs is shown by their students' college plans and by their income. These tables are based on data for sophomores only. The distributions on parents' responses to the questions of costs do not differ by year in school of the student, but the relationships among the other variables could be affected by the presence in the senior sample of parents whose HS&B children have already gone on to college.

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As Table 4 shows, the distribution of parents' responses to questions about college costs differ by whether their child has plans to go to college at some time in the future. For questions about all three types of institutions, parents of children planning to go to college in contrast with other parents gave a higher percent of correct responses and a lower percent of "Don't Know"'s. For example, 26 percent of the parents of those planning to go to college gave a correct estimate of the costs at a private four year school, in comparison with only 20 percent and 22 percent of those whose children did not plan to go to college or did not know whether they did. Those whose children were not certain of their plans had intermediate responses, with fewer "Don't Know" answers than parents whose children definitely did not plan to go on in school, and somewhat higher percents of correct estimates with respect to state and private four year schools. They may be parents who are still open to or seeking information about costs in case their child should opt for college.

Among those giving incorrect responses, parents whose children are planning to go to college, in contrast with other parents, are more likely to give under- rather than overestimates.

While accurate knowledge of college costs may be more important for lower income parents, higher income parents have a higher level of knowledge about college costs, as Table 5 shows.[4] The percents of "Don't Know" answers go down monotonically with income, and there is a tendency for the percent of correct responses to go up. On the other hand, perhaps because of the conflicting effects of income as a measure of need for knowledge and of income as a proxy for having greater access to knowledge, the differences among those in the highest bracket as compared with those with somewhat lower incomes are not dramatic. For knowledge of four year schools, those in the highest income category are not the most likely to give a correct response. They are, however, more likely than other parents to give overestimates, perhaps because they have as a referent the more expensive private and public schools.

Logit Analyses

Breakdowns such as those in 4 and 5 provide only limited understanding of which parents know about higher education costs, since both college plans and income are associated with a host of other variables measuring socioeconomic status. Income, for example, is associated with education. Those parents who have had more education do give a greater proportion of correct responses than other parents (see Olson, 1982) because they have been through the higher education system themselves, because they are better able to get information, or because they have better sources of knowledge through their continuing ties with their alma maters. The association of income with knowledge of college

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costs could be in part an effect of education, rather than of income per se. For the last stage of our analysis, then, we turn to a multivariate analysis of sophomore parents' knowledge of costs. We will include education, race, sex of child, sex of parents, language spoken in the home, income, whether another child is in college, and parents' earlier expectations that their HS&B child would go to college as the independent variables.

The dependent variables are whether the parent gave a correct response about college costs for a given type of institution. Since this dependent variable is dichotomous, assumptions of ordinary least squares regression are not met. Therefore, we use logistic regression. (See Hanushek and Jackson, 1977, for a discussion of such methods. The specific algorithm is that by Harrell, 1980, available in SAS.) For easier interpretation of the variables' effects, the logit coefficients have been transformed to effects on the probability of a correct answer at the observed mean. (See again Hanushek and Jackson, 1977.) The coefficients can therefore be interpreted as if they were coefficients in an OLS regression for a dichotomous variable. The R statistic in the tables is analogous to the multiple correlation coefficient in regression and gives a measure of a model's predictive power.

Table 6 shows the results of the logit analyses. Parent's education consistently has statistically strong effects on knowledge about each type of postsecondary institution's cost. Those with more education have a greater probability of having given correct responses. The absolute magnitude of these effects is small, however. For example, at the observed mean, an additional year of education increases the probability of a correct answer about community colleges by .008. Controlling for education and the other variables, income

has an effect significantly different from 0 only for state four year schools.[5] That most of the association between income and knowledge of costs reflects the correlation between income and education is not surprising, in light of the speculation about how better educated parents might have access to information about higher education.

We had found strong associations between college plans and knowledge of college costs. Here parents' earlier expectations about their children's college attendance was included. This variable has a clear statistically significant effect only with respect to private four year schools. Perhaps parents who earlier thought their children would go on in school looked into the costs of the sometimes more expensive private options. The effects on knowledge of costs about community or state four year institutions are only marginally significant. In all three cases, though, parents with college expectations for their children were more likely to give a correct response.

The direction of the effect of college expectations, at least, is consistent with what was anticipated in the earlier discussion. In that discussion, we also mentioned that different types of mistakes are associated with plans for college attendance as compared with plans that do not include college. We estimated our models again taking the direction of incorrect responses into account, using as the dependent variable a scale formed for each college type separately by coding "Don't Know" responses as 1, overestimates = 2, underestimates = 3 and correct estimates = 4. As pointed out earlier, while an underestimate of costs might lead to unrealistic aspirations for a college education, the perception of college costs exceeding their actual level may deter many students and their parents from even considering a college

education, and act, then, to some extent in the same direction as a "Don't Know." The major difference between the results in Table 6 and those from this supplementary analysis (not shown) was that when responses were coded to include whether an incorrect response was an under- or overestimate, parents' expectations had relatively large and statistically significant effects for all three types of postsecondary institutional types.

In Table 6 (as in the additional analyses) there were effects of other socioeconomic and family variables as well. For questions about four year schools, having had a child in college also increases accuracy of cost knowledge, while for the dependent variable of knowledge of costs of private four year schools, nonblacks have more accurate knowledge than blacks.

While these results are consistent with what might be expected on the basis of our preceeding discussion, the predictive power of the models is low, as indicated by the R statistic.[6] Part of the reason for this could be the slippage between parents' knowledge about particular schools and the way their responses were coded to the general question asked in the survey or between their knowledge of total costs and their knowledge of just the fees, books and tuition part of costs. On the other hand, it could be that acquisition of knowledge about higher education is a haphazard process for most people and a careful investigation for others, a difference unrelated to the socioeconomic and student characterizations included in our equations. It is quite possible that even many parents who expect their children to go on to college, for example, make college plans with only a vague notion of how much the expenses will be.

Discussion and Conclusions

An important piece of practical information about college is knowledge of the costs. Although for many families total college costs are offset by financial aid, the gross cost is often the first piece of information students and parents confront in the process of evaluating the cost of education after high school. Overall, the data analyzed here suggest that parents are not especially knowledgeable about the expenses for fees, tuition, and books at different types of schools. The percent of respondents answering "Don't Know" was quite high, considering that the question asked only for an estimate of educational costs and that the response categories were rather large. Yet, especially in the sophomore year, parents were more knowledgeable than their children, while children with more knowledgeable parents were also more knowledgeable. Parents and children seemed to be sharing their knowledge of college costs, with the direction of the flow perhaps stronger from parents to children than vice versa, but there is a rather limited amount of knowledge to share. The level of the parents' knowledge depended most strongly on the parents' own education. Educational advantage may be passed along because those parents with more education are the ones who have experience with the system of higher education and are the best equipped to get knowledge of any sort. The effect of having other children in college is consistent with the notion that those who have had exposure to the system of higher education know more about it. Race and family income had some effect on knowledge of costs as well. At the same time, even controlling for the socioeconomic level of the family, those who planned to use the knowledge--those with college expectations

for their children--were also somewhat more knowledgeable. The extent to which one could predict level of knowledge of college costs, though, was low. While this low level of explanatory power could be due to measurement problems with the dependent variable, it could also reflect a situation where equality of ignorance exists.

The reason for concern with the extent and determinants of level of knowledge of college costs is stated in a report by the College Entrance Examination Board:

> Poor knowledge about costs is significant because it influences whether students will enter postsecondary education at all.
>
> Mistaken estimates of educational costs may have dramatic consequences for the distribution of students among postsecondary institutions (College Entrance Examination Board, 1976: 11).

We have shown some relationship between parents' earlier expectations for their children and their 1980 knowledge of college costs, but not that their level of knowledge will affect college plans and attendance. Olson (1982), as part of a larger study of parents' knowledge of higher education, explicitly modeled a reciprocal causation between students' college plans and attendance and their parents' knowledge about costs. Among high school seniors, knowledge of costs had a stronger positive effect on the students' college plans and on whether they were actually attending college at the time their parents were surveyed than plans or attendance did on the parents' knowledge of college costs. For

sophomores, while knowledge of educational costs increased the probability that the student planned to go on in college, having college plans had a negative effect on level of knowledge of costs, perhaps because students and parents with these early plans had already stopped shopping around. While these models do indicate that parents' knowledge of costs has an impact on their children's college plans and attendance, one needs to keep in mind that such models are very sensitive to the particular specification used. The follow-up data from HS&B will allow a better estimate of the effect of parents' knowledge on their children's attainments

In selecting the most appropriate postsecondary activity, the ideal family would consider the net as well as the gross costs. As we have found elsewhere (Olson and Rosenfeld, forthcoming; Olson, 1982), parents do not always know much about financial aid, which helps to bring down the cost of college attendance, although knowledge of the financial aid system also increases chances that the student will go on in school. For financial aid, too, it is the more educated parents who have an advantage in terms of knowledge of the way higher education is financed. At the same time, at least in terms of college plans and attendance, the simultaneous causation models show a larger impact of knowledge of costs than of knowledge of financial aid sources and standards. Getting information about financial aid is often more difficult than getting information about gross college costs. Further, students may find out exactly how much aid they have received only very late in the college application process (Willett, 1976). Various studies have shown that college enrollments are more sensitive to changes in tuition than to changes in student financial aid awards (Weathersby, 1976; Hyde, 1978). Increasing institutional,

rather than student, financial aid (and thus lowering tuition) could be more effective in increasing equal access to higher education. But at the same time, one needs to keep in mind the need to disseminate information about costs and changes in them. To the extent that some students are disadvantaged by a simple lack of information, and to the extent that this lack of information is associated with their socioeconomic status, the goal of equal access to appropriate educational opportunities will not be realized.

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Footnotes

[1]More students, though, are attending college with some gap between finishing high school and going on to higher education. In 1972, 28 percent of all college students were over 25 years of age, while in 1978 the percent was 35 (Heyns and Bird, 1982: 60). Most of these students will be making financing decisions on their own rather than with their parents. This paper deals only with the "traditional" student, who plans in high school for further education.

[2]High School and Beyond is a longitudinal study. To see how their plans have worked out or changed and to see how the students make the transition to school, family formation and/or work, a subsample of students are being followed up at two year intervals. The first follow-up was completed in 1982, and the data released in the summer of 1983. For more information on High School and Beyond, see the technical reports on the student and parent surveys available from the National Center for Education Statistics and the April/July 1982 issue of Sociology of Education (vol. 55).

[3]The lower percentages of students who gave an estimate, and gave a correct estimate, may be due partially to the different times when the two surveys were conducted. At the time of the Parent Survey, after the passage of seven to eleven months, some students may have become more knowledgeable. It would seem, nonetheless, that the difference between sophomores and seniors would hold, and parents would remain more knowledgeable than students.

[4]The survey asked not only about employment earnings of the parents, but also about parents' self-employment income, income from interest, rents, trusts, transfer payments, and so on in order to get an accurate idea of total parental income. Only 4 percent of the parents explicitly refused to answer any of the income questions. Probably because many of these kinds of income were not salient for many respondents, there was a considerable amount of missing data beyond this. Some parents may have intended to answer "0" to a particular item, but did not do so, just leaving the space blank. With listwise deletion, only 64 percent of the parents would have had values on total parental income. By a series of prediction equations for the specific components of parental income estimated for various subgroups, we were able to calculate parental income for all but 3 percent of the sample.

[5]One might speculate that including whether another child was in college wipes out any effect of income. However, in models that excluded the variable for having another child in college, while the income coefficient is somewhat larger, the relative magnitude and statistical significance of the coefficients do not change greatly.

[6]The R^2's were low, too, for regressions on the knowledge scale, from 3 percent for knowledge of costs at junior or community colleges to 6 percent for knowledge of costs at private four-year schools.

TABLE 1

PARENTS' ESTIMATES OF COSTS (TUITION, FEES, BOOKS) AT THREE TYPES OF INSTITUTIONS OF HIGHER EDUCATION BY GRADE OF HIGH SCHOOL STUDENT

Parents' Estimate of Costs at:	Student's Year in School: Sophomore	Senior	Total
Public Junior or Community College			
Correct Estimate	34	33	34
Overestimate	35	37	36
Underestimate	15	14	14
Don't Know	16	16	16
Total[a]	100%	100%	100%
N[b]	3724469	2987914	6712383
$X^2=2.78, df=3$, not significant			
State Four-Year College or University			
Correct Estimate	10	9	10
Overestimate	71	73	72
Underestimate	1	1	1
Don't Know	17	17	17
Total[a]	99%	100%	100%
N	3717255	2893386	6710640
$X^2=2.91, df=3$, not significant			
Private Four-Year College or University			
Correct Estimate	24	25	24
Overestimate	33	36	34
Underestimate	19	17	18
Don't Know	24	22	23
Total[a]	100%	100%	99%
N	3711633	2979130	6690761
$X^2=9.16, df=3, p<.05$			

[a] Totals differ from 100 due to rounding.

[b] N's in this and Tables 2 through 5 are weighted to project population figures. Statistical tests were performed with deflated N's.

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TABLE 2

HIGH SCHOOL SENIORS' ESTIMATE OF COSTS AT THREE TYPES OF INSTITUTIONS OF HIGHER EDUCATION BY PARENTS' ESTIMATE OF COSTS

	Parent Response				
	Correct Estimate	Over-Estimate	Under-Estimate	Don't Know	Total
Student Response					
Public Junior or Community College					
Correct Estimate	33	26	28	25	29
Overestimate	40	48	26	39	41
Underestimate	13	8	34	13	14
Don't Know	14	17	12	23	16
Total[a]	100%	99%	100%	100%	100%
N[b]	878603	962508	364429	385521	2591057

$X^2=193.52, df=9, p<.01$

State Four-Year College or University					
Correct Estimate	14	7	18	5	8
Overestimate	70	76	63	66	73
Underestimate	0	1	7	2	1
Don't Know	16	16	11	28	18
Total[a]	100%	100%	99%	101%	100%
N	234863	1872596	35888	418776	2562123

$X^2=75.39, df=9, p<.01$

Private Four-Year College or University					
Correct Estimate	27	23	22	20	23
Overestimate	33	39	32	26	33
Underestimate	18	15	22	21	18
Don't Know	22	24	24	33	26
Total[a]	100%	101%	100%	100%	100%
N	652243	920818	419400	546481	2538937

$X^2=52.49, df=9, p<.01$

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[a]Totals differ from 100 due to rounding.

[b]See Table 1.

TABLE 3

HIGH SCHOOL SOPHOMORES' ESTIMATE OF COSTS AT THREE TYPES OF INSTITUTIONS OF HIGHER EDUCATION BY PARENTS' ESTIMATE OF COSTS

	Parent Response				
	Correct Estimate	Over-Estimate	Under-Estimate	Don't Know	Total
Student Response					
Public Junior or Community College					
Correct Estimate	27	24	25	24	25
Overestimate	34	38	28	30	34
Underestimate	9	7	18	10	10
Don't Know	30	31	29	36	31
Total[a]	100%	100%	100%	100%	100%
N[b]	1074371	1122610	460341	483343	3140659
$X^2=58.11, df=9, p<.01$					
State Four-Year College or University					
Correct Estimate	8	5	8	5	5
Overestimate	58	63	68	51	61
Underestimate	3	1	0	2	1
Don't Know	31	31	24	43	33
Total[a]	100%	100%	100%	101%	100%
N	313923	2276268	41693	487573	3119452
$X^2=41.69, df=9, p<.01$					
Private Four-Year College or University					
Correct Estimate	16	15	16	12	15
Overestimate	33	34	23	21	29
Underestimate	15	13	22	18	16
Don't Know	36	38	39	49	40
Total[a]	100%	100%	100%	100%	100%
N	762624	1046651	594829	681137	3085237
$X^2=69.94, df=9, p<.01$					

[a]Totals differ from 100 due to rounding.

[b]See Table 1.

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TABLE 4

PARENTS' ESTIMATES OF COSTS AT THREE TYPES OF INSTITUTIONS OF HIGHER EDUCATION BY SOPHOMORE STUDENTS' COLLEGE PLANS

	Student's Plans		
	College	No College	Don't Know
Parent's Estimate of Costs at:			
Public Junior or Community College			
Correct Estimate	35	32	32
Overestimate	35	35	40
Underestimate	17	8	10
Don't Know	13	25	18
Total[a]	100%	100%	100%
N[b]	2166321	455082	675283
$X^2=69.64, df=6, p<.01$			
State Four-Year College or University			
Correct Estimate	11	7	8
Overestimate	76	63	70
Underestimate	2	0	1
Don't Know	12	30	21
Total[a]	101%	100%	100%
N	2164715	458305	672447
$X^2=106.14, df=6, p<.01$			
Private Four-Year College or University			
Correct Estimate	26	20	22
Overestimate	36	29	30
Underestimate	20	16	18
Don't Know	18	35	30
Total[a]	100%	100%	100%
N	2158175	457316	671048
$X^2=84.94, df=6, p<.01$			

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[a]Totals differ from 100 due to rounding.

[b]See Table 1.

TABLE 5

PARENTS' ESTIMATES OF COSTS AT THREE TYPES OF INSTITUTIONS OF HIGHER EDUCATION BY FAMILY INCOME

Parent's Estimate of Costs at:	Family Income $10,000 and below	$10,001-20,000	$20,001-30,000	$30,001-40,000	over $40,000
Public Junior or Community Colleges					
Correct Estimate	28	32	34	34	38
Overestimate	35	37	33	36	36
Underestimate	11	13	16	17	16
Don't Know	26	19	18	13	10
Total[a]	100%	101%	101%	100%	100%
N[b]	525899	677308	715237	605721	1057995
	$X^2=79.98, df=12, p<.01$				
State Four-Year College or University					
Correct Estimate	8	8	11	12	11
Overestimate	62	71	69	73	78
Underestimate	1	1	2	2	1
Don't Know	28	21	18	14	10
Total[a]	99%	101%	100%	101%	100%
N	521118	676794	718069	607562	1052682
	$X^2=98.14, df=12, p<.01$				
Private Four-Year College or University					
Correct Estimate	16	21	28	25	26
Overestimate	33	32	26	36	39
Underestimate	17	16	20	20	21
Don't Know	34	32	27	19	14
Total[a]	100%	101%	101%	100%	100%
N	516745	674159	716506	607563	1054431
	$X^2=133.46, df=12, p<.01$				

[a]Totals differ from 100 due to rounding.

[b]See Table 1.

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TABLE 6. LOGISTIC REGRESSION ON PARENTS' KNOWLEDGE OF COLLEGE COSTS AT THREE TYPES OF INSTITUTIONS OF HIGHER EDUCATION[a]

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Independent Variables[b]	Type of Institution		
	Public Junior or Community College	State 4-Year College or University	Private 4-Year College or University
Race	.03	.000	.06*
Parent's Sex	.001	.006	-.02
Student's Sex	-.002	.01	.01
Parent's Education	.008+	.006**	.01**
Logged Parents' Income	.003	.01*	.002
Language Spoken at Home	.01	.02	-.03
Census Region (Non South)	-.007	-.03+	.02
Student's High School Grades	.002	-.001	.000
Parent's College Expectations when Child was in 8th or 9th Grade	.04+	.03+	.05**
Other Children in College	.02	.04**	.04*
Constant	-.47**	-.34**	-.46**
R	.04	.10	.13
χ^2	25.78**	38.41**	70.87**
N	2751	2747	2742

+.05≤p<.10
*.01≤p<.05
**p<.01

[a] Knowledge of college costs: 1=correct response; 0=incorrect or don't know. Coefficients=effects on probability of a correct answer at the observed mean.

[b] Race: 1=Black; 2=Nonblack.
Sex: 1=Male; 2=Female.
Parent's Education: 8=less than high school graduation; 12=high school graduation; 13=some college or less than 1 year vocational or trade school; 14=2-year college program or 1 to 2 years vocational or trade school; 15=more than 2 years vocational or trade school; 16=finished 4 or 5 year college program; 18=Master's degree; 22=Ph.D., M.D. or equivalent.
Language usually spoken at home: 1=English; 2=Non-English.
Census Region: 1=Non South; 0=South.
Student's High School Grades: 95=mostly A's; 87=about half A's, half B's; 82=mostly B's; 77=about half B's, half C's; 72=mostly C's; 67=about half C's, half D's; 62=mostly D's; 59=mostly below D.
Parent's expectations child would go to college when child in 8th or 9th grade: 1=yes; 0=no.
Other children in college: 1=yes; 0=no.

APPENDIX A

DISTRIBUTION OF COLLEGE COSTS (TUITION, FEES, BOOKS) AT THREE TYPES OF INSTITUTIONS OF HIGHER EDUCATION AND DISTRIBUTIONS OF PARENTS' ESTIMATES OF COLLEGE COSTS (TUITION, FEES, BOOKS)

	Actual College Costs	Parents' Estimates of College Costs
Public Junior or Community College		
"Correct Estimate" ($500-$1,000)	54	40
"Overestimate" ($1,001-$7,000)	6	43
"Underestimate"	40	17
Total	100%	100%
N	667	5638402
State Four-Year College or University		
"Correct Estimate" ($500-$1,000)	51	12
"Overestimate" ($1,001-$7,000)	43	87
"Underestimate"	6	1
Total	100%	100%
N	555	5569831
Private Four-Year College or University		
"Correct Estimate" ($3,001-$5,000)	52	32
"Overestimate" ($5,001-$7,000)	10	45
"Underestimate"	38	24
Total	100%	100%
N	990	5084979

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